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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,036	03/10/2004	Junichi Shinohara	250128US2	2107

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EXAMINER

MADDEN, GREGORY VINCENT

ART UNIT PAPER NUMBER

2622

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/796,036

Applicant(s)

SHINOHARA, JUNICHI

Examiner

Gregory V. Madden

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,7,8 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,7,8 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION***Response to Arguments***

Applicant's arguments filed August 30, 2006 have been fully considered but they are not persuasive.

Regarding claim 1, Applicant amended that claim to read "...a first auto focusing device configured to perform a high focusing accuracy; a second auto focusing device configured to perform a high focusing speed; a controlling device for controlling an operation of said first auto focusing device, and a ranging device for measuring a subject distance to said subject, wherein said controlling device is configured to switch between said first auto focusing device and said second auto focusing device to prioritize either said high focusing accuracy or said high focusing speed". Applicant argues that the Kaneda reference (U.S. Pat. 4,592,638) does not teach or suggest the use of a first auto focusing device configured to perform a high focusing accuracy, a second auto focusing device configured to perform a high focusing speed, or a controller configured to switch between the two (See Remarks Pg. 7). The Examiner agrees that Kaneda does not completely teach the newly amended limitations to claim 1, but the Examiner does not agree that the Nonaka reference (U.S. Pat. 6,366,736) also fails to teach the newly amended limitations to the claim. Specifically, the Nonaka reference teaches a first auto focusing device (Passive AF 40), a second auto focusing device (Active AF 30), and a controller configured to switch between the two (CPU 10). Noting Col. 7, Lines 1-10, Nonaka teaches that the second auto focusing device (Active AF 30) is used when objects are detected at short distances because active type AF provides for simpler processing than does passive type AF, and therefore it is inherent that active type AF can be performed at a higher speed than passive type AF. Passive type AF, however, is utilized when the distance to an object is determined to be greater than a particular threshold, therefore allowing for high accuracy auto focusing when objects are at a farther distance from the camera. In this regard, the

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Examiner believes that the Nonaka reference teaches all of the limitations of newly amended claim 1, and therefore a new ground of rejection of claim 1 is made in view of Nonaka.

Likewise, claims 2, 3, 5, 7, 8, and 10 are also rejected in view of Nonaka. Please see the rejections to claims 1-3, 5, 7, 8, and 10 set forth below.

Finally, the Examiner notes that the Applicant has cancelled claims 4, 6, and 9.

Specification

The title of the invention is not descriptive. Although the Applicant has amended the title to "IMAGE CAPTURING DEVICE", the Examiner believes that the new title does not sufficiently describe the invention. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "AUTO FOCUSING IN AN IMAGE CAPTURING DEVICE FOR PERFORMING HIGH FOCUSING ACCURACY OR HIGH FOCUSING SPEED".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5, 7, 8, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Nonaka (U.S. Pat. 6,366,736).

First, considering **claim 1**, the Nonaka reference teaches an image capturing apparatus comprising a photographic optical system (taking lens 13) for projecting an image of a subject, a focus driving device (focusing controlling part 12) which changes the focusing condition of the image projected to an imaging device by relatively moving at least one of a part or an entire of the photographic optical system (taking lens 13) and the imaging device to the other, a first auto focusing device (passive type AF) configured to perform a high focusing accuracy (when objects are greater than a predetermined distance from the camera), a second auto focusing device (active type AF) configured to perform a high focusing speed (when objects are less than a predetermined distance from the camera), a controlling device (CPU 10) for controlling an operation of the first auto focusing device, a ranging device (IRED 1 and light detecting sensor arrays 4a and 4b) for measuring a subject distance to the subject, wherein the controlling device (CPU 10) is configured to switch between the first auto focusing device (passive type AF) and the second auto focusing device (active type AF) to prioritize either the high focusing accuracy (from passive type AF) or the high focusing speed (from active type AF). Please refer to Figs. 1a and 1b, Col. 5, Line 1 – Col. 6, Line 36, and Col. 7, Lines 1-17. Further, while Nonaka does not specifically show the imaging device for converting the projected image into an image signal, it is inherent that such an imaging device is present in an electronic camera so as to convert received light into image signals for output to the user.

Regarding **claim 2**, the limitations of claim 1 are taught above, and the Nonaka reference further teaches a camera having a first and second auto focusing device (passive and active-type AF, respectively) wherein the first auto focusing device (passive AF 40) is controlled to carry out the evaluation in a peripheral focusing range of a focusing condition which corresponds to the subject distance measured. Further, a peripheral focusing range is set in accordance with the subject distance (See Nonaka Fig. 3A, and Col. 5 Line 60 – Col. 7, Line 26).

In regard to **claim 3**, Nonaka discloses the limitations of claim 2 above, and the Nonaka reference further shows that the controlling device (CPU 10) sets the peripheral focusing range wider when the

subject distance is more than a previously set predetermined distance to prioritize the high focusing accuracy (via passive type AF) and sets the peripheral focusing range narrower when the subject distance is less than the predetermined distance to prioritize the high focusing speed (via active type AF). Nonaka teaches these limitations in Fig. 3A and Col. 6, Line 46 – Col. 7, Line 17.

Considering **claim 5**, the limitations of claim 1 are taught above, and the Nonaka reference shows that the controlling device (CPU 10) switches between the first auto focusing device (passive-type AF 40) and the second auto focusing device (active-type AF 30) to operate the first auto focusing device (40) to operate the first auto focusing device (passive type AF) when the subject distance is more than a predetermined distance to prioritize the high focusing accuracy and to operate the second auto focusing device (active type AF) when the subject distance is less than the predetermined distance to prioritize the high focusing speed, as is taught in Col. 5, Line 1 – Col. 6, Line 36, and Col. 7, Lines 1-17.

Next, as for **claim 7**, the limitations of claim 2 are taught above, and the Nonaka reference further shows that the controlling device (CPU 10) controls the first auto focusing device (passive type AF) so as to carry out the evaluation in the peripheral focusing range of a focusing condition which corresponds to the subject distance obtained by the ranging device, and sets the peripheral focusing range pursuant to the presence or absence of the subject (i.e. a person or a tree) which is mixed with a long distance and a short distance that is based on the distance to each area. Nonaka teaches these limitations again in Col. 8, Lines 6-38.

Regarding **claim 8**, the limitations of claim 7 are taught above by Nonaka, and Nonaka teaches that the controlling device (CPU 10) sets the peripheral focusing range wider when the subject is not in a condition mixed with the long distance and short distance (i.e. in the presence of trees) to prioritize the high focusing accuracy and sets the peripheral focusing range narrower when the subject is in the condition mixed with the long distance and the short distance. Please refer to Col. 7, Lines 18-52.

Finally, in regard to **claim 10**, the limitations of claim 8 are taught above, and the Nonaka reference shows that the controlling device (CPU 10) switches between the first auto focusing device (passive-type AF 40) and the second auto focusing device (active-type AF 30) to operate the first auto focusing device (40) when the subject is not in a condition mixed with the long distance and the short distance to prioritize the high focusing accuracy and to operate the second auto focusing device when the subject is in the condition mixed with the long distance and the short distance to prioritize the high focusing speed (i.e. the active type AF is operated when there are multiple objects in the image capture area, for example trees and buildings, whereas passive type AF is operated when only a single object with an indistinct background is in the image capture area). Please refer to Col. 8, Lines 6-38.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Hashimoto (U.S. Pat. 6,704,054)

Yamazaki (U.S. Pub. 2003/0081137)

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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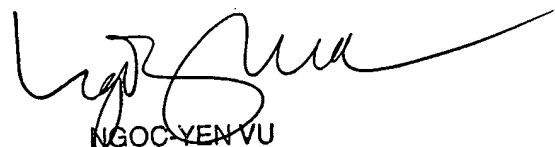
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory V. Madden whose telephone number is 571-272-8128. The examiner can normally be reached on Mon.-Fri. 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory Madden
October 30, 2006



NGOC-YEN VU
SUPERVISORY PATENT EXAMINER